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ABSTRACT

Computer courses have become part of the educational administration knowledge base. This paper considers issues under the general question, What effect does computing have on the knowledge base? Three major areas concerning the impact of computer technology on the educational-administration knowledge base are described. First the paper describes how educational administration preparation programs have been and are being shaped by personal computer technology. Next, the paper considers issues that have arisen around the addition of computer technology to degree and certification requirements. The paper argues that the issues surrounding administrative knowledge and the use of personal computer technology are intertwined with perceptions of the administrator's role--as building manager or as instructional leader. Finally, assumptions often made about school administration and personal-computer technology are listed. Some of the assumptions are that: students will learn computer skills on their own; computer skills are not linked to educational-administration programs; there is no need for a sociopolitical understanding of educational technology; and instructional application is not part of computer literacy. Recommendations for training include assessing students' computer knowledge upon their entry into the program and placing them into one of three competency levels. (LMI)

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The Impact of Personal Computing Technology on the Educational Administration Knowledge Base

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The Impact of Personal Computing Technology on the Educational Administration Knowledge Base

Great attention has been given by professors of educational administration to the more visible aspects of the reform movement such as the UCEA-sponsored Leaders for America's Schools (1987), the Carnegie Forum's "A Nation Prepared" (1986), and the National Policy Board's revelation of "a set of nine bold and far-reaching recommendations for reforming administrator preparation" (UCEA Review, 1989).

This movement to reform preparation programs in educational administration can be traced to the political, social, and economic trends of the eighties. As important as these forces and the profession's response may be, the technological trends of the decade, particularly personal computer technology, have also exerted pressure on the shape of educational administrator preparation programs.

Evidence of the impact of personal computer technology can be seen in program requirements that include computer courses. In a survey of over eighty doctoral-level educational administration programs, Spuck and Bozeman (1988) found that a computing course was required by 20% to 30% of the institutions at each level: master's degree, doctoral degree, and mid-management/principal's certificate. In addition, they characterized administrative computing as ill-defined and lacking a practical or research-based body of knowledge, and the respondents lacked consensus on what constituted appropriate content of computer courses.

These findings may be explained by the relatively recent development of computing courses. Nonetheless, computer courses have become part of the educational administration knowledge base, and a discussion of the issues surrounding administrative computing is needed. A consideration of the issues will assist in making the assumptions held about administrative computing and administration explicit. This discussion is not only important because of the magnitude and the inexorable, permeating nature of the technology, but also because it may provoke a reappraisal of the fundamental purpose of the administrative role in the schooling process.

The issues this paper will consider come under the general question: **What effect does computing have on the knowledge base?** Three major areas concerning the impact of computer technology on the educational administration knowledge base will be discussed. First, a description of how educational administration preparation programs have been and are being shaped by personal computer technology. Next, issues will be considered that have arisen around the addition of computing content to degree and certification course requirements. In conclusion, a list of what assumptions that may have been made about school administration and personal computer technology will be presented.

The issues surrounding administrative knowledge and use of personal computer technology are intertwined with perceptions of the role of the administrator. In order to properly consider the appropriate form and content of administrative computing preparation, the role of school administrators is inevitably re-explored. As an example, administrative computing provides a fresh perspective from which to view the arguments heard in the perennial debate over the role of the principal: building manager or instructional leader.

To some extent, decisions made about the appropriate use of computers by administrators depend on the conception of educational administration that is held. **What conception of the educational administrator should guide professors of educational administration in making decisions about computing for educational administrators -- and how does the advent of personal computer technology alter it?** Is computing simply a set of skills that should be learned, or is the technology in the process of modifying the educational administration knowledge base?

Should preparation follow practice? After all, relatively few practicing school administrators make effective use of personal computer technology, and many that do use the technology do so in rather limited ways. Is it legitimate to require candidates to attain skills that incumbents apparently lack?

This issue is related to the old dispute about the role of the building principal. Should training be prescriptive or normative? If most principals are more accurately described as building managers, will prescribing the principal's role as an instructional leader be relevant to the experience of the beginning principal? The relationship between the old issue and the new becomes more apparent when the question is given a twist: Should the emphasis of computer training for educational administrators be on administrative or instructional leadership applications?

Many of the issues can be grouped around the central question of what should be included in the educational administration curriculum. In other words, **what should be the nature of computing courses or experiences included in the educational administration preparation program, and what competencies should be expected as a result?** Although support for the position that educational administration students should become computer literate is evident, the requirements vary considerably by institution (Spuck, 1988).

Should the topics be considerably different from topics taught at the undergraduate and high school level? If the course begins with more than basic knowledge and skills about computing or if the pace is brisk, what provisions will be made for the novice computing student?

If a computer course is required, should a procedure exist for waiving the requirement for qualified students?

How should the competencies be acquired? Which alternative is most appropriate: conventional course, workshop, or guided independent study? Should the course be offered from within the educational administration program? Or should the student encounter computer learning experiences throughout the educational administration program? To what extent should educational administration professors be responsible for instructing students in basic computer operation skills; e.g., procedure for labeling floppy disks or use of the numeric and alphabetic portions of the keyboard?

Should credits earned from computer courses be counted toward fulfillment of degree requirements at all levels? Under the heading of "Leadership and management processes and functions," the National Policy Board for Educational Administration (1989) recommended that students master computer applications. Similarly, the recommendations to the president for an Ed.D. program at the University of North Carolina, recommended that studies in "computer applications in administrative practice" should be included (1989). Apparently, most doctoral-granting programs do not require that a computer course be included but will permit it as an option (Spuck & Bozeman, 1988).

Six computer technology domain competencies and skills for a building administrator were outlined by Spuck (1988). What computer competencies should be possessed by educational administrators? Should the administrator have the capability of influencing the way the school makes use of technology? Have the computer learning experiences changed how the administrator thinks about using and managing information technology, personally and for schooling? Has the administrator acquired sufficient computer skills to enable greater understanding of and control over the functioning of the school? Can the administrator utilize the computer system to improve the school's planning and control process?

If principals make greater use of personal computers, are they likely to spend less time interacting with students, teachers, and the public? Does the computer system save the administrator time and allow more work to get done?

Assumptions

1. Instructional applications is not considered part of the definition for administrative computer literacy.

2. Students will learn the computer skills needed to be effective on their own. Graduate students will enter educational administration programs with greater proficiency than the faculty.

3. Educational administration faculty members have sufficient expertise to integrate computer learning activities into their coursework.

4. Sufficient computing resources are available both in institutions of higher education and in school administrators' offices to support state-of-the-art training and practice.

5. Computer skills are computer skills. Administrators-in-training can learn generic computer skills somewhere besides the educational administration program and make the needed transfer of computer skills to administrative functions on their own.

6. It is legitimate to award graduate credit for a computing course at either or all of these degree levels: master's, specialist's, or doctoral.

7. Acquisition of computer skills by administrators will improve their performance.

8. It is not necessary to require administration students to analyze the social and political aspects of computer use within the school.

9. Administrators will save time by using the computer.

10. Administrators need no special training to benefit by the greater flow of information produced by computer technology.

Recommendations for Training

Ideally, students' computer knowledge and skills should be assessed upon their entry into the educational administration program. The assessment results would be used to place students into one of three groups.

The first group would be comprised of computer novices, those with little or no computer knowledge or skills. The novices' lack of skill is often compounded by an unreasonable fear of the computing process. These students will probably be unable do learn at the pace of others, and will experience a great deal of frustration in attempting to do so. The novices would be required to complete a basic skills course as a prerequisite to further computer training.

The second group would contain students who had little anxiety about computer learning and minimal keyboarding skills. They could be joined by students from the novice group who had completed the basic skills course. This group of students would receive instruction in using applications software to carry out administrative functions and be required to investigate the constraints and opportunities surrounding instructional computing.

The remaining students would have been able to demonstrate competency in the use of applications software. This group would contract for an independent course of study designed to expand their understanding of applications software and investigate the choices and opportunities in the area of instructional computing.

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